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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/647,487	08/25/2003	Mark J. Buenz	21220.04136 (GR202AS050)	2367
24024	7590	07/18/2006	EXAMINER SWARTHOUT, BRENT	
CALFEE HALTER & GRISWOLD, LLP 800 SUPERIOR AVENUE SUITE 1400 CLEVELAND, OH 44114			ART UNIT 2612	PAPER NUMBER

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

57

Office Action Summary	Application No.	Applicant(s)	
	10/647,487	BUENZ ET AL.	
	Examiner	Art Unit	
	Brent A. Swarthout	2612	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 June 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-30 and 38-47 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-30 is/are allowed.
- 6) ☒ Claim(s) 38, 41-44, 46 and 47 is/are rejected.
- 7) ☒ Claim(s) 39, 40 and 45 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

1. Claims 1-30 are allowed.
2. Claims 39,40 and 45 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

- a. Claims 38,41-44 and 46-47 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al.

Tanaka discloses resonant circuit C1 (Fig. 20) at a vehicle wheel, monitoring tire pressure with resonant circuit C1 (col. 8, lines 32-36), generating a variable frequency signal via circuit 33, magnetically coupling the variable frequency to resonant circuit (col. 8, lines 15-20), inducing a change in the resonant circuit indicative of pressure (col.8, lines 20-35; col.7, lines 49-57), E-field (or electromagnetically) coupling the resonant frequency to a receiver circuit (col.9, lines 20-25; col.10, lines 3-17) and finding a pressure reading from the coupled resonant frequency (col.8, lines 35-36), except for specifically stating that aircraft tire pressure is sensed.

It would have been obvious to one of ordinary skill in the art to sense aircraft tire pressure using the system of Tanaka, in order that an

aircraft could have had accurate pressure readings, it being noted that it would have been an obvious manner of intended use to use a tire pressure detection system with aircraft tires as opposed to any other type of vehicle tires.

The wire loop 101 (Fig. 20) acts as an E-field antenna since it receives electromagnetic energy from resonant circuit coil 13. Since the received E-field energy is used to determine the pressure of a tire (col. 9, line 62), it would have been obvious that the sensing circuit would have provided conversion of E-field indication into a pressure value. It is noted that applicant has not claimed any specific details of antenna structure which would have overcome the application of wire loop 101 as a receiving "antenna".

Regarding claim 42, Tanaka teaches use of phase difference detection 200.

Regarding claim 43, Tanaka teaches generating frequencies over different ranges including the resonant frequency (col. 10, lines 3-17).

Regarding claims 46-47, choosing to transmit pressure readings over a bus or use a non-volatile indicator would have been obvious since such bus is standard on aircraft for conveying parameter information and a non-volatile indicator would have been obvious in order to prevent loss of data.

4. Regarding applicant's remarks filed with the response on 6-2-06, it is stated that Tanaka discloses use of magnetic field as opposed to an E-field. However, since Tanaka teaches that the generated field is an "electromagnetic" field (col. 8, line 20), such would have satisfied the limitation of an E-field, since fields generated by electromagnetic coils are used (col. 10, lines 10-17), the claims not setting forth particular structure to differentiate an E-field from an electromagnetic field. The receiving wire loop 101 of Tanaka satisfies the limitations of a receiving antenna.

5. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brent A Swarthout whose telephone number is 571-272-2979. The examiner can normally be reached on M-F from 6:30 to 4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mike Horabik, can be reached on 571-272-3068. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Application/Control Number: 10/647,487
Art Unit: 2612

Page 5



Brent A Swarthout
Art Unit 2636

**BRENT A. SWARTHOUT
PRIMARY EXAMINER**